Lab Assignment

Functions

**PY-05-L3
Scope Behavior**

Lab Objective

Understand how the scope of a variable influences its behavior and how it can be manipulated.

Lab Mission

Create global variables and try to make changes to them within a function.

Lab Duration

10–20 minutes

Requirements

- Basic knowledge of Python

Resources

- Environment & Tools
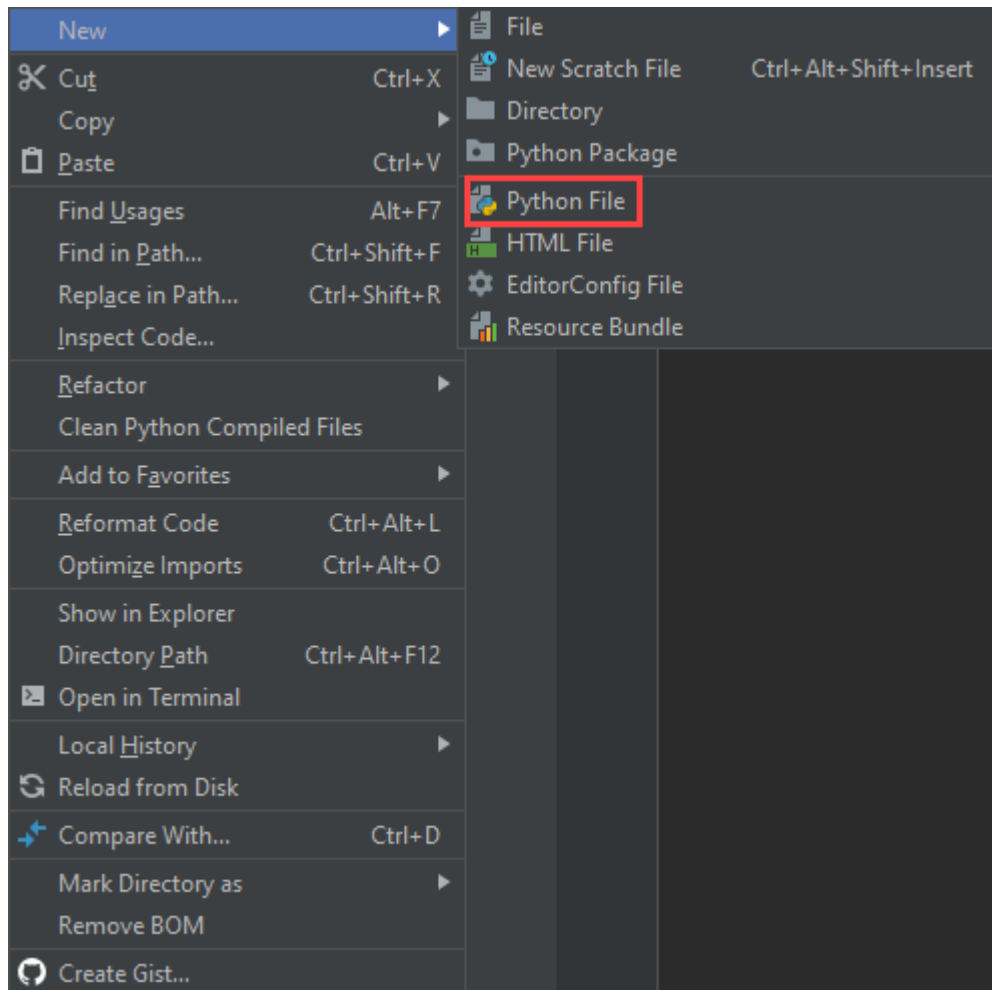 - Windows or Linux
    - PyCharm
    - Python 3

Textbook References

- Chapter 5: Functions
  - Section 2: Code Handling

Lab Task: Understanding Scope in Programing

In this task, you will learn how a global scope influences variables.

1 Create a new Python file in PyCharm by right-clicking the project you created and selecting **New** > *Python File*.

2 Declare two different global variables.

```
global_var = 5
changed_global_var = 20
```

3   Define a simple function.

```python
def local_change():
```

4   Within the function, change the value of the first variable and print it.

```python
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
```

5   Within the function, declare the second variable as global.

```python
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
    global changed_global_var
```

6   Within the function, change the value of the second variable and print it.

```python
def local_change():
    global_var = 10
    print("inside function global_var's value: ", global_var)
    global changed_global_var
    changed_global_var += 5
    print("inside function changed_global_var's value: ",
changed_global_var)
```

7   Invoke the function.

```python
local_change()
```

8   Print the values of both functions after their invocation.

```python
print("outside function global_var's value: ", global_var)
print("outside function changed_global_var's value: ",
changed_global_var)
```